REMARKS

Request for Initialed PTO-1449 Form

In reviewing the above-captioned application file upon allowance, the undersigned has noted that acknowledgement was not received for the PTO Form(s) 1449 filed with the Information Disclosure Statement(s) on February 28, 2001. Accordingly, a copy of each unacknowledged PTO Form(s) 1449 is attached hereto. The Examiner is respectfully requested to return the initialed form(s) to the undersigned as soon as possible.

Rejections under 35 U.S.C.§112

Claims 1-25 have been rejected as being unclear in the recitation of "whether the semiconductor itself is an acceptor material or donor material." Claims 1 and 25 have been amended for clarity as indicated above. Withdrawal of the rejection is therefore respectfully requested.

Rejections under 35 U.S.C. §102(b)

The Examiner maintains the rejection of claims 1-8, 10-20, and 22-24 under 102(b) as being anticipated by Nakayama et al. (EP 0450 862 A2). Nakayama et al. is asserted to teach an organic thin film element having all of the features of the present claimed invention, with the exception of the features of claims 9 and 21. Applicants traverse this rejection and withdrawal thereof is respectfully requested.

The Examiner asserts that because the claims recite "comprising" for the feature a) of the charge transfer material, which is open-ended, the claims encompass a charge transfer material that contains a mixture of donor and acceptors.

The present invention, as encompassed by claim 1, is drawn to a device for electrical contacting or for the isolation of organic or inorganic semiconductors in electronic or optoelectric devices comprising

a substrate, either in the form of

a) a contact material consisting of an organic or inorganic electrical conductor, or

b) an isolating material consisting of an organic or inorganic dielectric; and

a patterned or unpatterned charge transfer material, which is on or at a surface of the substrate and which forms a charge transfer complex with an organic or inorganic semiconductor,

wherein the charge transfer material

a) comprises charge transfer components in the form of donors or acceptors,

b) forms a self-assembling layer of one or more atomic and/or molecular layers,

c) has a direct or indirect bond to the surface of the substrate, and

d) forms a donor material in the charge transfer complex if the semiconductor is an acceptor or forms an

acceptor material in the charge transfer complex if the semiconductor is a donor material.

Thus, the device of the present invention includes a charge transfer complex that is formed from two components, i.e. the charge transfer material and the semiconductor. Since the charge transfer complex of the present invention is formed from the interaction between the charge transfer material and the semiconductor, the semiconductor must be either an acceptor or a donor. The device of the present invention is different from Nakayama et al. with regard to both the structure and the function.

With Nakayama et al., the function of the device disclosed in the reference is the formation of a microscopic neutral-ionic transition in a particular organic thin-film material made from layers of donors and acceptor materials. The function of the device of Nakayama et al. is to obtain the neutral-ionic transition in the charge transfer complex under an applied electric field, i.e. switching function. This difference in the function of Nakayama et al. results in a difference in the structure of the device of the prior art compared to the present invention.

With Nakayama et al., the charge transfer complex is formed from the semiconducting layer by itself (layer 12 of the reference). With the present invention, on the other hand, the charge transfer complex is formed from the interaction of the

charge transfer material and the semiconductor. The present invention requires the formation of a charge transfer complex from two components, i.e. the charge transfer material and the semiconductor. By forming the charge transfer complex from the charge transfer material and the semiconductor, the present invention achieves the ability of allowing the charge transfer material to function as an insulating material or a conducting material, depending on whether the semiconductor is a donor or an acceptor. This feature has been more clearly recited in amended claims 1 and 25. It is not possible to achieve these properties with the device of Nakayama et al., wherein the semiconductor by itself is the charge transfer complex. As a result, the present invention differs in both structure and resulting properties from the device of Nakayama et al. These differences have been more clearly recited in claims 1 and 25. As such, the present invention is not anticipated by Nakayama et al. and withdrawal of the rejection is respectfully requested.

As the above-indicated remarks address and overcome the objections and rejections of the Examiner, withdrawal of the objections and rejections and allowance of the claims is respectfully requested.

Should the Examiner have any questions, regarding the present application, he is requested to please contact, MaryAnne Armstrong, PhD (Reg. No. 40,069) in the Washington DC area at (703) 205-8000.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

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